

U.S. Department of the Interior  
Bureau of Land Management  
Little Snake Field Office  
455 Emerson Street  
Craig, CO 81625-1129

## ENVIRONMENTAL ASSESSMENT

**EA-NUMBER:** DOI-BLM-CO-N010-2011-0095-EA

**CASEFILE/PROJECT NUMBER/LEASE NUMBER:** COC81267, COD054985, COD038749B, COC074990 Pipeline ROW, COC075000 Pipeline ROW, COC044228 Pipeline ROW amendment

**PROJECT NAME:** Two multi-well pads in Powder Wash

**LEGAL DESCRIPTION:**

COC081267: Carl Allen #40, #41: SWSW Section 28, T12N, R97W, 6th PM  
COD054985: Powder Wash Government #5 and #10: NESE Section 8, T11N, R97W, 6th PM  
COD038749B: BW Musser #43 and #44: NESE Section 8, T11N, R97W, 6th PM

**APPLICANT:** Wexpro Company

**PLAN CONFORMANCE REVIEW:** The proposed action is subject to the following plan:

Name of Plans: Little Snake Resource Management Plan and Record of Decision (ROD) approved on April 26, 1989; and the Colorado Oil and Gas Leasing & Development Environmental Impact Statement (EIS) and the ROD signed on November 5, 1991.

Language: The proposed Powder Wash Wells would be located within Management Unit 2 (Little Snake Resource Management Plan). One of the objectives of Management Unit 2 is to provide for the development of the oil and gas resource. The development of other resource uses/values within this unit is allowed consistent with the management objectives for oil, gas, and forest resources.

The proposed action was reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The proposed action is in conformance with the objectives for this management unit.

**NEED FOR PROPOSED ACTION:** To allow development of federal natural gas resources to meet the public's continuing economic demands for a dependable and affordable supply of oil, while giving due consideration to the protection of other resource values; and facilitate the

leaseholder's rights to develop oil and gas resources within their federal mineral leases in accordance with the Mineral Leasing Act of 1920, as amended.

The requested Federal Action is needed to provide access across federal lands managed by the BLM and allow development of minerals within an existing federal unit, according to the principles of multiple use, while maintaining the rights and obligations of other users and protecting resources in the project area.

**PUBLIC SCOPING PROCESS:** The action in this EA is included in the NEPA log posted on the LSFO web site: [http://www.blm.gov/co/st/en/BLM\\_Information/nepa/lsfo.html](http://www.blm.gov/co/st/en/BLM_Information/nepa/lsfo.html). The Notices of Staking (NOSs) have been posted in the public room of the Little Snake Field Office for a 30-day public review period beginning November 23, 2010 when the NOSs were received, and may be viewed during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays.

No comments were received.

**DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:** The proposed action is to approve six Applications for Permit to Drill (APDs) submitted by Wexpro Company. Wexpro Company proposes to drill six gas wells from 2 locations on BLM administered land located in the Powder Wash Field in T11N & T12N, R97W. APDs have been filed with the LSFO for the above listed wells. The APDs include drilling and surface use plans that cover mitigation of impacts to vegetation, soil, surface water, and other resources. Mitigation not incorporated by Wexpro Company in the drilling and surface use plans would be attached by the BLM as Conditions of Approval to an approved APD.

The proposed wells are located approximately 65 miles northwest of Craig, Colorado. Construction work is planned to start during the spring of 2011 and the estimated duration of construction and drilling for each of the wells is 20 days. Short access roads would be constructed for each well. 627 feet of new access road would be constructed resulting in new surface disturbance of 0.5 acre. All road construction would be on lease and on BLM surface and would not require a federal Right-of-Way.

The proposed well pads would be cleared of all vegetation and leveled for drilling. Topsoil and native vegetation would be stockpiled for use in reclamation. All of the other wells will be drilled from single well pads. Approximately 12 acres would be disturbed for construction of the well pads. This would include the 330' by 420' well pad, the topsoil, and subsoil piles. A reserve pit or cuttings pit would be constructed on each well pad to hold drill mud and cuttings. If a well is a producer, cut portions of the well site would be backfilled and unused portions of the well sites would be stabilized and re-vegetated. If a gas well proves unproductive, it would be properly plugged and the entire well pad and access road would be reclaimed.

Wexpro Company did include plans for a gas sales pipeline with each APD. QEP Field Services Company will construct the pipelines as rights-of-way (ROW). Approximately 3,572 feet of new pipeline would be installed and connected to existing QEP Field Services Company pipelines in

the Powder Wash Field to service the wells once production is established. The proposed pipelines parallel new or existing roads. Total surface disturbance associated with pipeline construction would be 3.1 acres. The pipeline ROWs would have a 30-ft construction width. All pipeline construction would be on BLM surface. An existing pipeline will be rerouted around the proposed Powder Wash #5 well pad.

Total surface disturbance for the proposed action would be 15.6 acres. Upon interim reclamation total surface disturbance would be 7.7 acres.

## **NO ACTION ALTERNATIVE**

The No Action alternative would be to deny the Application for Permit to Drill and therefore the well would not be drilled, and the pad, access road, and facilities would not be constructed.

## **AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES**

For the following resources and issues, those brought forward for analysis will be addressed below.

<b>Resource/Issue</b>	<b>N/A or Not Present</b>	<b>Applicable or Present, No Impact</b>	<b>Applicable &amp; Present and Brought Forward for Analysis</b>
Air Quality			X
Areas of Critical Environmental Concern	X		
Environmental Justice/ Socio-Economics		X	
Cultural Resources		X	
Flood Plains	X		
Fluid Minerals			X
Forest Management	X		
Hydrology/Ground			X
Hydrology/Surface			X
Invasive/Non-Native Species			X
Native American Religious Concerns		X	
Migratory Birds			X
Paleontology			X
Prime and Unique Farmland	X		
Range Management			X
Realty Authorizations			X
Recreation/Transportation		X	
Soils			X

Solid Minerals		X	
T&E and Sensitive Animals			X
T&E and Sensitive Plants	X		
Upland Vegetation			X
Visual Resources		X	
Waste, Hazardous or Solid			X
Water Quality - Ground			X
Water Quality - Surface			X
Wetlands/Riparian Zones	X		
Wild and Scenic Rivers	X		
Wild Horse & Burro Mgmt	X		
Wilderness Characteristics/WSA's	X		
Wildlife - Aquatic	X		
Wildlife - Terrestrial			X

## AIR QUALITY

**Affected Environment:** There are five federal Class I areas within 100 kilometers of the Little Snake Resource Management Area (LSRMA) boundary, all of which occur in Colorado. There are no federal Class I areas in Utah or Wyoming within 100 km of the LSRMA boundary. There are no non-attainment areas nearby that would be affected by the proposed action.

### *Proposed Action*

**Environmental Consequences:** Short term, local impacts to air quality from dust would result during and after well pad construction. Drilling operations produce air emissions such as exhaust from diesel engines that power drilling equipment. Air pollutants could include nitrogen oxides, particulates, ozone, volatile organic compounds, fugitive natural gas, and carbon monoxide. Gas flaring reduces the health and safety risks in the vicinity of the well by burning combustible and poisonous gases like methane and hydrogen sulfide.

At a regional scale, atmospheric dust, caused by destabilization of soil as a result of land use changes coupled with drought conditions, is receiving increased attention for its ability to alter alpine environments. Dust covered snow melts faster because it can absorb more solar energy, which affects snowpack conditions and can result in earlier and faster spring runoff events. The Colorado Plateau has been identified as a primary dust source for several recent alpine dust events on the Western Slope of Colorado. Areas of low annual precipitation, little to no vegetation cover, and an available supply of sediment are of primary concern for mitigation of expanding or new sources of dust.

**Mitigation Measures:** Retaining as much vegetative cover as possible during the project and/or reclaiming and covering disturbed areas shortly following excavation should help keep localized dust down during dry periods.

### *No Action Alternative*

Under the No Action alternative, because no new disturbance, drilling rigs, or truck traffic is anticipated, no impacts to air quality would occur.

## **CULTURAL RESOURCES**

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see *An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, *An Isolated Empire, A History of Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resource Series, Number 2 and *Colorado Prehistory: A Context for the Northern Colorado River Basin*, Colorado Council of Professional Archaeologists.

### *Proposed Action*

Environmental Consequences: The approval of six APDS, creation of two well pads, access roads, and issuance of right-of-way grants for the associated pipelines are considered undertakings under Section 106 of the National Historic Preservation Act. BLM has the legal responsibility to take into account the effects of its actions on historic properties located on Federal land. BLM Manual 8100 Series, the Colorado State Protocol and BLM Colorado Handbook of Guidelines and Procedures for Identification, Evaluation, and Mitigation of Cultural Resources provide guidance on how to accomplish Section 106 requirements with the appropriate cultural resource standards. The proposed undertakings have undergone cultural resource studies.

Darlington, David

2011 *Class III Cultural Resource Inventory and Testing Report for the QEP Field Services Company Carl Allen Nos. 40 and 41 High Pressure and Low Pressure Natural Gas Pipelines, Moffat County, Colorado.* 11-WAS-091. BLM LSFO #12.30.2011. OAHP# MF.LM.R899. Western Archaeological Services, Rock Springs, WY.

2010a *Class III Cultural Resource Inventory and Testing Report for the Wexpro Company Government #5 & 10 and Musser #43 & 44 Well Pad and Access Road Moffat County, Colorado.* 10-WAS-219. BLM LSFO#12.48.2010. OAHP# MF.LM.R849. Western Archaeological Services, Rock Springs, WY.

2010 *Class III Cultural Resource Inventory and Testing Report for the Wexpro Company Carl Allen Nos 40 and 41 Well Pad and Access Road Moffat County, Colorado.* 10-WAS-378 BLM LSFO#12.4.2011. OAHP #MF.LM.NR1121. Western Archaeological Services, Rock Springs, WY.

Pastor, Jana

2011 *Class III exclusion for the proposed QEP Field Services, Government #5 & 10 and Musser #43 & 44 Natural Gas Pipelines, Moffat County, Colorado.* 11-WAS-086. BLM LSFO #12.24.2011. OAHP# MF.LM.R885. Western Archaeological Services, Rock Springs, WY.

These studies did not identify any archaeological or historical sites eligible for the National Register (historic properties). The proposed undertakings may proceed as described with the following mitigative measures in place.

Mitigative Measures:

1. Archaeological monitoring of the undertaking will be conducted as directed by the Powder Wash Memorandum of Agreement (2010) and a treatment plan developed by Western Archaeological Services (2009).
2. Any cultural and/or paleontological (fossil) resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and the authorized officer will make any decision as to proper mitigation measures after consulting with the holder.
3. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:
  - Whether the materials appear eligible for the National Register of Historic Places;
  - The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
  - Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
4. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from

the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

*No Action Alternative*

Under the No Action alternative, because no disturbance is anticipated, no impacts to cultural resources would occur.

## **FLUID MINERALS**

**Affected Environment:** The proposed wells would be in favorability zone 4 (highest for oil and gas potential). These wells would penetrate the Wasatch and Fort Union Formations.

*Proposed Action*

**Environmental Consequences:** The casing and cementing program would be adequate to protect all of the resources identified above. All coal seams and fresh water zones would also be protected. The BOP system would be adequately sized. All of these zones would be cased off.

**Mitigative Measures:** None.

*No Action Alternative*

Under the No Action alternative, there would be no development of fluid minerals and no effects on existing fluid mineral reservoirs.

## **HYDROLOGY/SURFACE**

**Affected Environment:** The proposed wells would be constructed near Ace in the Hole Draw, an ephemeral drainage. Any runoff from the well pads, pipelines, or access roads would drain towards the Ace in the Hole Draw, which drains into Powder Wash. All stream segments near the well pad location are presently supporting classified beneficial uses. No impaired stream segments occur in the vicinity of the proposed action.

*Proposed Action*

**Environmental Consequences:** Runoff water from the well sites would drain towards Powder Wash, which is an ephemeral tributary to the Little Snake River. Increased sedimentation to Powder Wash during spring runoff or from high intensity rainstorms is the most likely environmental consequence from the proposed action. Although some sediment may be transported off site and eventually reach perennial waters, the mitigation provided in the Surface Use Plan and the Conditions of Approval would reduce the potential impacts caused by surface runoff. See also “Water Quality – Surface” contained in this document.

*No Action Alternative*

Under the No Action alternative, there would no surface disturbance and no effect to the surface hydrology.

## INVASIVE, NONNATIVE SPECIES

Affected Environment: Invasive and noxious weeds are present in the area. Invasive annuals such as downy brome (cheatgrass), halogeton, blue mustard and yellow alyssum are common, occupying disturbed areas. Invasive annual weeds are typically established on disturbed and high traffic areas whereas biennial and perennial noxious weeds are less common in occurrence. Downy brome and halogeton are on the Colorado List C of noxious weeds and efforts to control halogeton are intensifying in this area. Perennial noxious weeds that are present within the surrounding areas include Russian knapweed, hoary cress (whitetop), Canada thistle and biennial thistles. The BLM is in cooperation with the Moffat County Cooperative Weed Management program to employ the principals of Integrated Pest Management to control noxious weeds on public lands. Additionally, the BLM, Moffat County, livestock operators, pipeline companies and oil and gas operators have formed the Northwest Colorado Weed Partnership to collaborate efforts on controlling weeds and finding the best integrated approaches to achieve results.

### *Proposed Action*

Environmental Consequences: The surface disturbing activities and associated traffic involved with construction of these wells, pipelines, support infrastructure and subsequent activities would create an environment and provide a mode of transport for invasive species and other noxious weeds to become established. Construction equipment and any other vehicles brought onto the site can introduce weed species. Wind, water, recreation vehicles, livestock and wildlife would also assist with the distribution of weed seed into the newly disturbed areas. The annual invasive weed species (downy brome, yellow alyssum, blue mustard and other annual weeds) occur on adjacent areas and would occupy the disturbed areas. The bare soils and the lack of competition from a perennial plant community would allow these weed species to grow unchecked and could affect the establishment of seeded plant species. Establishment of perennial grasses and other seeded plants is expected to provide the necessary control of invasive annual weeds within 2 or 3 years. Additional seeding treatments of the disturbed areas may be required in subsequent years if initial seeding efforts are not successful.

The perennial and biennial noxious weeds in the area are less frequently established on the uplands but some potential exists for their establishment in draws and swales or areas that would collect additional water. The largest concern in the project area would be for these species to become established and not be detected, providing seed which can be moved onto adjacent rangelands. The operator would be required to control any invasive and/or noxious weeds that become established within the disturbed areas involved with drilling and operating the well.

Mitigation attached as Conditions of Approval to minimize disturbance and obtain successful reclamation of the disturbed areas, as well as weed control utilizing integrated practices, including herbicide applications, would help to control the noxious weed species. All principles of Integrated Pest Management should be employed to control noxious and invasive weeds on public lands.

Mitigative Measures: None.

### *No Action Alternative*

Under the No Action alternative, because no disturbance is anticipated, no additional effects to the spread of invasive weeds would occur.

## **MIGRATORY BIRDS**

**Affected Environment:** BLM Instruction Memorandum No. 2008-050 provides guidance towards meeting BLM's responsibilities under the Migratory Bird Treaty Act (MBTA) and the Executive Order (EO) 13186. The guidance emphasizes management of habitat for species of conservation concern by avoiding or minimizing negative impacts and restoring and enhancing habitat quality. The LSFO provides both foraging and nesting habitat for a variety of migratory bird species. Several species on the USFWS's Birds of Conservation Concern (BCC) List occupy these habitats within the LSFO. The project is located in the Northern Rockies Bird Conservation Region.

Native plant communities in the Powder Wash area are comprised primarily of sagebrush and saltbush with an understory of grasses and forbs. Small stand of junipers are also present throughout the Powder Wash area. A variety of migratory birds may utilize these vegetation communities within the project area during the nesting period (May through July) or during spring and fall migrations. Sandstone bluffs and juniper lined ridge tops provide nesting habitat for golden eagles and ferruginous hawks. These features can be found throughout the Powder Wash area. There are multiple historical nest sites for both species in the Powder Wash area. The project area contains potential nesting and/or foraging habitat for the following USFWS 2008 Birds of Conservation Concern: ferruginous hawk, Brewer's sparrow, sage sparrow, sage thrasher and loggerhead shrike.

### *Proposed Action*

**Environmental Consequences:** The Proposed Action would disturb approximately 15.6 acres of migratory bird habitat. Since the proposed well sites are near existing disturbances and several roads and natural gas facilities already exist in the area, habitat quality for migratory birds is already marginal. If construction activities occur during the nesting season, there could be negative impacts to migratory bird species through nest destruction or increased stress leading to nest abandonment. Since habitat is marginal, impacts to migratory bird and their habitat would be minor. Overall, the project is not expected to have a measurable influence on the abundance or distribution of migratory birds at a regional scale.

**Mitigative Measures:** None.

### *No Action Alternative*

Under the No Action alternative, because no disturbance or loss of vegetation is anticipated, there would be no effects to migratory birds under this alternative.

## **NATIVE AMERICAN RELIGIOUS CONCERNS**

Letters were sent to the Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Utes Tribal Council, Shoshoni Tribal Historic Preservation Officer, and the Colorado Commission of Indian Affairs in the spring of 2011 discussing upcoming projects the BLM would be working on in FY10 and FY11. Letters were followed up with phone calls. No comments were received (Letters on file at the Little Snake Field Office, Craig, Colorado).

## **PALEONTOLOGY**

**Affected Environment:** The geologic formation at the surface is the Tertiary Age formation, Wasatch Formation, Cathedral Bluffs Tongue (Twc), a variegated claystone, mudstone and sandstone formation. This formation has been classified a Class II formation for the potential for occurrence of scientifically significant fossils.

### *Proposed Action*

**Environmental Consequences:** Scientifically significant fossils are occasionally found within this formation (Armstrong & Wolney, 1989). The potential for discovery of significant fossils on this location is considered to be moderate. If any such fossils are located here, construction activities could damage the fossils and the information that could have been gained from them would be lost. The significance of this impact would depend upon the significance of the fossil.

**Mitigative Measures:** If fossils are discovered during construction or other operations, all activity in the area will cease and the Field Office Manager will be notified immediately. An assessment of significance will be made within an agreed time frame. Operations will resume only upon written notification by the Authorized Officer.

### *No Action Alternative*

Under the No Action alternative, because no ground disturbance, there would be no effects to paleontological resources.

### References

Armstrong, Harley J. and Wolney, David G., 1989, Paleontological Resources of Northwest Colorado: A Regional Analysis, Museum of Western Colorado, Grand Junction, CO, prepared for Bur. Land Management, Vol. I of V.

Miller, A.E., 1977, Geology of Moffat County, Colorado, Colo. Geol. Surv. Map Series 3, 1:126,720.

## **RANGE MANAGEMENT**

**Affected Environment:** The Carl Allen #40 and #41 wells would be contained in the Powder Wash Allotment and the Powder Wash Government #5 and #10, and the BW Musser #43 and #44 within the Nipple Rim Allotment. The Powder Wash Allotment is permitted for cattle and sheep grazing from November through May for a total of 2,502 AUMs although the grazing

permittee has taken substantial non-use for the past several years due to drought and increasing oil and gas activity. The Nipple Rim Allotment is permitted for sheep grazing October through May for a total of 1,989 AUMs.

*Proposed Action*

Environmental Consequences: The proposed wells and associated road and pipeline construction would remove approximately 15.6 acres of native vegetation (7.7 acres would remain disturbed after reclamation is complete). This loss of vegetation and associated disturbance from vehicle traffic, noise and human presence may cause livestock to alter their distribution pattern; however with sheep grazing, the animals can be made to use or avoid various areas because they are herded. Unherded grazing by cattle may result in over utilization of the vegetative resources in other parts of the grazing allotment where oil and gas activity is not as prevalent. The presence of livestock may hinder reclamation efforts.

Mitigative Measures: Herding livestock may help encourage use of underutilized areas and would help keep livestock off of reclaimed well pads. Fencing of the well pad during reclamation efforts may help the establishment of native vegetation.

*No Action Alternative*

Under the No Action alternative, because no ground disturbance, there would be no effects to range resources.

## **REALTY AUTHORIZATIONS**

Affected Environment: The proposed project area is a developed oil and gas field and contains numerous buried pipeline rights-of-way and other realty authorizations.

*Proposed Action*

Environmental Consequences: Existing buried pipelines or other facilities could be accidentally damaged during project activities. Impacts would be temporary until any damage is repaired.

Mitigative Measures: Potential damage to existing rights-of-way would be minimized by the following actions:

- Avoid existing rights-of-way during the project.
- Utilize the “One Call” system to locate and stake the centerline and limits of all underground facilities in the area prior to project initiation.
- Provide 48-hour notice to the owner/operator of all facilities prior to performing any work near existing rights-of-way.

*No Action Alternative*

Under the No Action alternative, because no ground disturbance, there would be no need for a realty authorization.

## SOILS

**Affected Environment:** The proposed wells would be located within the Tresano-Hiatha-Kandaly association loam soil-mapping unit and the Torriorthents soil mapping unit. These deep soils are well drained and found on hills, toe slopes, and alluvial fans. Slopes within these units average 2 to 20 percent. These soils formed in alluvium derived from sandstone and shale. Runoff is moderate to rapid and the hazard of wind and water erosion is moderate to high.

### *Proposed Action*

**Environmental Consequences:** The construction and operation of the Powder Wash Wells would affect soils within and immediately adjacent to the proposed areas of disturbance. Increased soil erosion from wind and water would occur during construction of the well pads, pipelines, and access roads. Erosion would continue throughout the operational life of the wells. Loss of topsoil, soil compaction, and possible increases in sediment loads to drainages are impacts most likely to occur.

Vegetation and soil would be removed from approximately 15.6 acres of land. Soil productivity would decline due to reduced soil microbial activity, impaired water infiltration, mixing of soil horizons, top soil loss, and introduction of weeds. Soil loss from construction would be greatest shortly after project start and would decrease in time as a result of stabilization through revegetation and reclamation of disturbed areas. Soil erosion would be reduced to an acceptable level with the mitigation described in the Surface Use Plan and Conditions of Approval in the approved APDs. This mitigation would reduce the potential to have excessive sediments and salts in runoff water from the well sites.

**Mitigative Measures:** Additional mitigative measures would be employed to prevent or reduce accelerated erosion if it begins to occur within or on constructed drainage and diversion ditches or surface drainages affected by the roads, pipelines, or well pads.

### *No Action Alternative*

Under the No Action alternative, because no ground disturbance, there would be no effects to soils resources.

## T&E AND SENSITIVE ANIMALS

**Affected Environment:** There are no ESA listed or proposed species that inhabit or derive important benefit from the project area. Critical habitat for the razorback sucker, Colorado pikeminnow, bonytail chub and humpback chub is located downstream of the project area. The general area provides overall habitat for greater sage-grouse, a BLM sensitive species and a candidate for ESA listing. Habitat for one additional BLM sensitive species, the Brewer's sparrow, occurs in the project area. Brewer's sparrows are a summer resident in Colorado and nest in sagebrush stands. Nests are constructed in sagebrush and other shrubs in denser patches of shrubs. This species would likely be nesting in the project area from mid-May through mid-July.

### *Proposed Action*

#### Environmental Consequences:

##### Colorado River Fish

In May 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addresses water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado. In response to BLM's PBA, the FWS issued a Programmatic Biological Opinion (PBO) (ES/GJ-6-CO-08-F-0006) on December 19, 2008, which determined that BLM water depletions from the Colorado River Basin are not likely to jeopardize the continued existence of the Colorado pike minnow, humpback chub, bonytail, or razorback sucker, and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat.

A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin was initiated in January 1988. The Recovery Program serves as the reasonable and prudent alternative to avoid jeopardy and provide recovery to the endangered fishes by depletions from the Colorado River Basin. The PBO addresses water depletions associated with fluid minerals development on BLM lands, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. The PBO includes reasonable and prudent alternatives developed by the FWS which allow BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. As a reasonable and prudent alternative in the PBO, FWS authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in the amount equal to the average annual acre-feet depleted by fluid minerals activities on BLM lands.

This project has been entered into the Little Snake Field Office fluid minerals water depletion log which will be submitted to the Colorado State Office at the end of the Fiscal Year.

##### Greater Sage-grouse

The Proposed Action area provides limited habitat for grouse during non-critical times of the year or when moving to and from winter or nesting habitat. Much of the project area has been impacted by previous oil and gas development. Impacts to grouse species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, direct loss of habitat, displacement due to disturbances, noise and an increase in human activity and habitat fragmentation. Approximately 16 acres of sage grouse habitat would be altered with the proposed action. Disturbing 16 acres would have minimal impacts to sage grouse habitat on a landscape level, however, sustained development and the proliferation of roads, well pads, pipelines, compressor stations and other surface facilities will continue to reduce habitat patch size and affect both habitat quality and quantity. It is likely that sage grouse use of the area will decrease as disturbances and habitat fragmentation continue.

##### Brewer's Sparrow

Impacts to Brewer's sparrows are described in the Migratory Bird section of this EA.

Mitigative Measures: None.

*No Action Alternative*

Under the No Action alternative, because no disturbance or loss of vegetation is anticipated, there would be no effects.

## UPLAND VEGETATION

Affected Environment: The well sites are all contained in the same soil map unit as shown on the table below:

Well Name	Soil Map Unit	Range Site	Potential Native Vegetation	Actual Vegetation Present
Carl Allen 40, 41 BW Musser 43, 44 Powder Wash Government Well 5, 10	201	Clayey 9-11"	streambank wheatgrass, western wheatgrass, Indian ricegrass, Nevada bluegrass, Wyoming big sagebrush, needleandthread, shadscale saltbush	Western wheatgrass, Indian ricegrass, Gardner's saltbush, cactus, Wyoming big sagebrush, shadscale, Nevada bluegrass, juniper, crested wheatgrass

*Proposed Action*

Environmental Consequences: The Proposed Action would completely remove approximately 16 acres of vegetation on Federal surface. The removal of approximately 6 acres of vegetation per well pad location would be relatively minor in the larger landscape; it becomes a larger action when 6 wells on two locations are considered as one action. The removal of 16 acres of vegetation would be in addition to numerous other plant community intrusions such as the dense road network, other wells, and the Powder Wash Camp. As evidenced by the high levels of halogeton and cheatgrass within the undisturbed plant community, any disturbance at these locations has the potential to greatly increase the presence of these non-native species if required weed management practices are not followed. As required, the sites would be partially reclaimed if the wells are producing wells, and completely reclaimed if the wells do not produce. Aridity, highly saline soils, and weed competition would result in very slow re-establishment of the native species that are reseeded. Careful adherence to required reclamation practices would be vital to ensuring that the direct impacts of the Proposed Action do not have long-term adverse impacts to the plant community.

Mitigative Measures: Adherence to COAs.

#### *No Action Alternative*

Under the No Action alternative, because no disturbance or loss of vegetation is anticipated, there would be no effects.

### **WASTE, HAZARDOUS OR SOLID**

**Affected Environment:** The Resource Conservation and Recovery Act (RCRA) of 1976 established a comprehensive program for managing hazardous wastes from the time they are produced until their disposal. U.S. Environmental Protection Agency (EPA) regulations define solid wastes as any “discarded materials” subject to a number of exclusions. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980 regulates mitigation of the release of hazardous substances (spillage, leaking, dumping, accumulation, etc.) or threat of a release of hazardous substances into the environment. Civil and criminal penalties may be imposed if the hazardous waste is not managed in a safe manner and according to regulations. The Colorado Department of Public Health & Environment (CDPHE) administers hazardous waste regulations for oil and gas activities in Colorado.

#### *Proposed Action*

**Environmental Consequence:** The project would fall under environmental regulations that impact disposal practices and impose responsibility and liability for protection of human health and the environment from harmful waste management practices or discharges. The direct impact would be if a solid waste or hazardous material is discarded and contaminates land surface either by solid, semi-solid, liquid, or contained gaseous material. Hazardous, civil, and criminal penalties may be imposed if the waste is not managed in a safe manner, and according to EPA regulations.

**Mitigative Measures:** The project would be regulated under the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations, which are extremely stringent, as well as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that provides for the definition of hazardous substance, pollutant, and contaminant. The mitigation would include the stringent regulation of waste containment within the project area.

#### *No Action Alternative*

Under the No Action alternative, because no drilling or construction activities would be permitted there would be no effects

### **WATER QUALITY – GROUND**

**Affected Environment:** Rocks at or near the surface consist primarily of Tertiary age, Wasatch Formation member, Cathedral Bluffs Tongue (Twc). These rocks can and do contain potable, useable water.

#### *Proposed Action*

**Environmental Consequences:** There is the potential that during drilling and setting of surface casing the operation will encounter useable groundwater. Fresh to moderately saline groundwater

(TDS concentration < 10,000 PPM) is likely to be found within the Wasatch Formation. Water flows are most likely to occur in the sandstone beds of the Wasatch Formation.

**Mitigative Measures:** The APDs contains a geologic downhole report that requires that the Operator isolate and protect all fresh to moderately saline water (TDS < 10,000 PPM) that is encountered during drilling from communication and contamination with other fluids. The Operator is required to submit a report showing the depth and analysis of all groundwater encountered during drilling.

*No Action Alternative*

Under the No Action alternative, because no drilling or construction activities would be permitted there would be no effects.

## **WATER QUALITY – SURFACE**

**Affected Environment:** Any surface runoff from the proposed parcels would drain into the nearest perennial or ephemeral drainage. Water quality standards and any impairments that are relevant to the application would be determined at the site-specific APD stage of development.

*Proposed Action*

**Environmental Consequences:** Surface disturbance from the construction of well pads, access roads, and pipelines, and could result in degradation of surface water quality and groundwater quality from non-point source pollution, especially from potentially increased soil erosion and sedimentation.

Potential direct impacts would chiefly be brought about by soil disturbance due to construction of well pads, access roads, and pipelines, and would include increased surface water runoff, erosion, off-site sedimentation and dissolved constituents (salt loading) to downstream waters. Such hydrologic effects may cause changes in downstream channel morphology such as bed and bank erosion or accretion. The magnitude of these potential impacts to water resources would depend on the proximity of the disturbance to the drainage channel, slope aspect and gradient, degree and area of soil disturbance, soil character, duration and time within which construction activity would occur, and the timely implementation and success or failure of mitigation measures.

Direct impacts would likely be greatest shortly after the start of construction activities and would decrease in time due to proper implementation of Best Management Practices (BMPs) that would include proper design of facilities along with effective temporary stabilization measures that would promote permanent natural vegetative stabilization and reclamation of disturbed areas. Construction activities would occur over a relatively short period, and therefore the majority of the disturbance would be evident but short lived. Impacts to surface water quality would be managed (minimized) through the implementation, monitoring, and necessary adjustment of BMPs prescribed. However, short-term and minor impacts may occur during storm flow events.

Petroleum products and other chemicals, accidentally spilled, could result in surface and groundwater contamination. Similarly, possible leaks from reserve and evaporation pits could degrade surface and ground water quality. Authorization of development projects would require full compliance with BLM directives and stipulations that relate to surface and groundwater protection.

**Mitigative Measures:** Potential effects would depend on site-specific location of future development and cannot be predicted or quantified at the leasing stage. General conditions of approval at the APD stage will specify Best Management Practices that will include reclamation of plant communities and water control measures to prevent and limit erosion and sedimentation, such as road and pad location and design, culverts, and silt traps. Existing regulations require operators ensure an adequate casing program is designed to protect ground water from contamination.

The use of lined reserve pits, or the elimination of reserve pits, would reduce or eliminate seepage of drilling fluid into the soil and prevent it from eventually reaching groundwater. Spills or produced fluids (e.g., saltwater, oil, and/or condensate in the event of a breach, overflow, or spill from storage tanks) could result in contamination of the soils onsite, or offsite, and could potentially impact surface and groundwater resources in the long term. The casing and cementing requirements imposed on proposed wells would reduce or eliminate the potential for groundwater contamination from drilling mud and other surface sources.

Reference: Colorado Department of Public Health and Environment Water Quality Control Commission. 2010. Regulations #33, 37, and 93. <http://www.cdphe.state.co.us/regulations/wqccregs/index.html>

#### *No Action Alternative*

Under the No Action alternative, because no drilling or construction activities would be permitted there would be no effects.

## **WILDLIFE – TERRESTRIAL**

**Affected Environment:** The Powder Wash Area provides marginal habitat for mule deer and pronghorn antelope. Occasionally, elk will utilize the area although this is primarily for migration purposes. This area does not provide critical winter habitat for any of these species. Much of the project area has been impacted by previous oil and gas development. Most big game animals avoid the project area due to heavy human activity associated with the active gas field. Although there are no known raptor nests within a half mile of the proposed pipeline, Powder Wash provides foraging habitat for golden eagles, red-tailed hawks and ferruginous hawks.

#### *Proposed Action*

**Environmental Consequences:** Approximately 16 acres of wildlife habitat would be altered from construction of the wells and pipelines. Impacts to wildlife species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat, increased stress and loss of habitat. These impacts are

more significant during critical seasons, such as winter or reproduction. Although the project area does not provide critical habitat for wildlife species, some impacts to wildlife would still be expected from this project. Impacts would mostly occur from habitat modification or displacement during construction activities.

Mitigative Measures: None.

#### *No Action Alternative*

Under the No Action alternative, because no drilling or construction activities would be permitted there would be no effects.

**CUMULATIVE IMPACTS SUMMARY:** Cumulative impacts may result from the development of the Powder Wash wells when added to non-project impacts that result from past, present, and reasonably foreseeable future actions.

Past actions near the project area that have influence on the landscape are energy development, wildfire, recreation, hunting, grazing, and ranching activities.

Present and proposed actions near the project area are primarily gas and oil wells, pipelines, and facilities associated with the Powder Wash Unit. The surface is public land and used for grazing and hunting activities, in addition to energy development.

Surface disturbance associated with oil and gas activity would increase the potential for erosion and sedimentation. Contrasts in line, form, color, and texture from development would impact the visual qualities on the landscape.

Cumulative impacts to the plant communities within the lease and adjacent areas include an incremental reduction of continuity in the plant communities in terms of acreages that remain undisturbed. Loss of continuity results in smaller and smaller areas of undisturbed native vegetation and the potential for loss of integrity within the larger plant community. Fragmented plant communities can lose resilience to natural and man-made disturbance due to isolation of areas from seed sources necessary for proper age class distribution of plants, and subsequently, a greater opportunity for stressors such as drought to have a more severe impact on the plant community as a whole. The increased disturbance also makes native plant communities more susceptible to invasion by annual weeds as vectors for increasing weeds. Even with weed control measures applied, the potential for weeds to move further into undisturbed remnant areas increases as these remnants become smaller and more isolated from larger undisturbed areas.

Cumulative impacts to the livestock grazing operations in the area may be increased through the proposed action. This area has not received the rapid rate of energy development compared to other areas of NW Colorado. The development that has occurred in this area has yet to negatively affect livestock production. If continued growth occurs, the growth in wells, roads, and human activity has the potential to reduce the availability of forage in this area far beyond direct impacts caused by construction.

Habitat fragmentation from well pad construction and the associated roads have likely decreased the nesting suitability for migratory birds in the resource area. Ingelfinger (2001) found that roads associated with oil and gas development have a negative impact on passerines bird species. Bird densities were reduced within 100m of each road. Due to the amount of new road construction and an increase in traffic on these roads, passerine populations in the area are likely decreasing.

The cumulative impacts of additional wells and roads in the Powder Wash Unit would continue to degrade habitat for the greater sage-grouse and Columbian sharp-tailed grouse. Fragmentation, mostly due to road construction, is an important factor contributing to a decrease in habitat quality. Disturbances such as higher traffic volume and other human activities also contribute to degradation of habitat quality. Continued oil and gas development would lead to decreased use of the habitat.

Although big game species are able to adapt to disturbances better than other wildlife, increased development would still have impacts to mule deer, elk, and antelope. Timing stipulations adequately protect big game species during critical times of the year; however, continued oil and gas development would lead to decreased use of the habitat due to increased human activity. A significant amount of vehicle traffic occurs with oil and gas development. Impacts to big game may be vehicle-animal collisions, as these are a major cause of mortality for big game species.

Future development of the Powder Wash Unit for the purpose of energy production is likely to occur. When added to the existing activities in the project area approval of this proposed action would not cause undue damage to surface or subsurface resources.

#### References:

Ingelfinger, F. 2001. The Effects of Natural Gas Development on Sagebrush Steppe Passerines in Sublette County, Wyoming. University of Wyoming, Laramie, WY.

## **STANDARDS:**

**PLANT AND ANIMAL COMMUNITY (animal) STANDARD:** Much of the Powder Wash project area is not capable of supporting healthy diverse populations of wildlife. Existing heavy oil and gas development along with the abundance of halogeton has decreased habitat quality throughout the project area. Well locations along the fringe of the developed area are still capable of supporting use by wildlife. The development of these wells is likely to further displace wildlife from this area. This standard is not currently being met. The development of additional wells in this area would not improve habitat conditions for wildlife.

### **SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal)**

**STANDARD:** The project area provides marginal habitat for greater sage grouse. Large portions of the Powder Wash landscape are being fragmented due to extensive natural gas development. Sustained development and the proliferation of roads, well pads, pipelines, compressor stations and other surface facilities will continue to reduce habitat patch size and affect both habitat quality and quantity.

**PLANT AND ANIMAL COMMUNITY (plant) STANDARD:** The Proposed Action would completely remove approximately 16 acres of native vegetation. As long as required weed control and reclamation practices are followed, the Proposed Action would meet this standard as negative impacts to the larger plant community would be minimized and the disturbance would be essentially temporary.

### **SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant)**

**STANDARD:** There are no federally listed threatened or endangered or BLM sensitive plant species within or in the vicinity of either proposed well. This standard does not apply.

**RIPARIAN SYSTEMS STANDARD:** There are no riparian or wetland resources identified on federal lands within the project area. This standard does not apply.

**WATER QUALITY STANDARD:** The proposed action would meet the public land health standard for water quality. Reclamation of the pipeline corridors would be completed immediately after installation to minimize sheet and rill erosion from the corridor. Interim reclamation of the unused area on the well pads would be completed to minimize sheet and rill erosion from the well sites. When the well pads are no longer needed for production operations, the disturbed well pads and access roads would be reclaimed to approximate original contours, topsoil would be redistributed, and adapted plant species would be reseeded. These Best Management Practices would help to reduce accelerated erosion of the sites. No stream segments near this project are listed as impaired.

**UPLAND SOILS STANDARD:** The proposed action would not meet the upland soil standard for land health, but it is not expected to while the well locations, pipelines, and access roads are used for operations. The well pad sites, pipeline corridors, and access roads would not exhibit the characteristics of a healthy soil. Several Best Management Practices have been designed into the project or are attached as mitigating measures that would reduce impacts to and conserve soil

materials. Upland soil health would return to the well pads, pipeline corridors, and access roads disturbances after reclamation practices and well abandonments have been successfully achieved.

**PERSONS/AGENCIES CONSULTED:** Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

**SIGNATURE OF PREPARER:** /s/ Shawn Wiser

**DATE SIGNED:** 08/08/11

**SIGNATURE OF ENVIRONMENTAL REVIEWER:** /s/ Barbara Sterling

**DATE SIGNED:** 08/08/11

**Attachments:** Maps

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**DOI-BLM-CO-N010-2011-0095-EA**

Based on the analysis of potential environmental impacts contained in the EA and all other available information, I have determined that the proposal and the alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.
2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.
3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern.
4. There are no highly controversial effects on the environment.
5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.
6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State or local natural resource related plans, policies or programs.
7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.
8. Based on previous and ongoing cultural surveys and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.
9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**DOI-BLM-CO-N010- 2011-0095-EA**

10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

I have reviewed the direct, indirect and cumulative effects of the proposed activities documented in EA No. DOI-BLM-N010-2011-0095-EA. I have also reviewed the project record for this analysis and the impacts of the proposed action and alternatives as disclosed in the Alternatives and Environmental Impacts sections of the EA. Based upon a review of the EA and the supporting documents, I have determined that the project is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. Because there would not be any significant impact, an environmental impact statement is not required.

**SIGNATURE OF FIELD MANAGER: /s/ Timothy J. Wilson for FM**

**DATE SIGNED: 08/08/11**

## **Decision Record**

DOI-BLM-CO-N010- 2011-0095-EA

### **DECISION AND RATIONALE:**

I have determined that approving this APD is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures provided in the Application for Permit to Drill and the Conditions of Approval. Right-of-Way Grants COC075000 and COC074990 will be issued to QEP Field Services Company. Right-of-Way Grant COC044228 will be amended to allow for the existing pipeline reroute. The project will be monitored as stated in the Compliance Plan outlined below.

**MITIGATION MEASURES:** The mitigation measures for this project are found in the file room of the Little Snake Field Office. The APD 12-point surface use plan, well location maps, and the Conditions of Approval are found in the well case file labeled COC81267 Well #40 & Well #41, COD054985 Well #5 & Well #10, and COD038749B Well # 43 & Well #44. ROW stipulations and maps for Grants COC075000, COC074990, and COC044228 issued to QEP Field Services Company are in the serialized case files.

### **COMPLIANCE PLAN(S):**

#### **Compliance Schedule**

Compliance will be conducted during the construction phase and drilling phase to insure that all terms and conditions specified in the lease and the approved APD are followed. In the event a producing well is established, periodic inspections as identified through the Inspection and Enforcement Strategy and independent well observations will be conducted. File inspections will include a review of all required reports and the Monthly Report of Operations will be evaluated for accuracy.

#### **Monitoring Plan**

The well location and access road will be monitored during the term of the lease for compliance with pertinent Regulations, Onshore Orders, Notices to Lessees, or subsequent COAs until final abandonment is granted; monitoring will help determine the effectiveness of mitigation and document the need for additional mitigative measures.

#### **Assignment of Responsibility**

Responsibility for implementation of the compliance schedule and monitoring plan will be assigned to the Fluid Mineral staff in the Little Snake Field Office. The primary inspector will be the Petroleum Engineering Technician, but the Petroleum Engineer, Natural Resource Specialist, Realty Specialist, and Land Law Examiner will also be involved.

#### **Administrative Review or Appeal Opportunities**

This decision is effective upon the date the decision or approval by the authorized officer. Under regulations addressed in 43 CFR Subpart 3165, any party adversely affected has the right to

appeal this decision. An informal review of the technical or procedural aspects of the decision may be requested of this office before initiating a formal review request. You have the right to request a State Director review of this decision. You must request a State Director review prior to filing an appeal to the Interior Board of Land Appeals (IBLA) (43CFR 3165.4).

If you elect to request a State Director Review, the request must be received by the BLM Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado 80215, no later than 20 business days after the date the decision was received or considered to have been received. The request must include all supporting documentation unless a request is made for an extension of the filing of supporting documentation. For good cause, such extensions may be granted. You also have the right to appeal the decision issued by the State Director to the IBLA.

#### Contact Person

For additional information concerning this decision, contact Shawn Wiser, Natural Resource Specialist, Little Snake Field Office, 455 Emerson Street, Craig, CO 81625, Phone (970) 826-5086.

**SIGNATURE OF FIELD MANAGER: /s/ Timothy J. Wilson for Field Manager**

**DATE SIGNED: 08/08/11**



